



Centre for Research & Development

Research Supervisor (Guide) Profiles

Discipline of Supervision: **Biochemistry**



Dr. Priya Josson Akkara

Professor
Department of Life Sciences
School of Biological and Forensic Sciences

Areas of Specialisation:

Environmental Biochemistry, Bio-nanotechnology, Phyto-therapeutics, Wound healing, Functional foods

Dr. Priya Josson Akkara is a Professor in biochemistry, with over 27 years of cross-disciplinary expertise spanning academia, research, and industry. She graduated as a University Gold Medalist in both her B.Sc. (Chemistry) from MG University and M.Sc. (Biochemistry) from Kerala University before earning her Ph.D. from the Vellore Institute of Technology, where her doctoral work integrated in vivo and in silico studies on the protective role of beta-carotene on environment toxicity. Her research work spans biochemistry, pharmacology, toxicology, biotechnology, and sustainability, with a strong focus on nano-phytotherapeutics, wound healing, functional foods, carbon foot-printing and environmental biochemistry. Dr. Akkara's scholarly portfolio features over 20 high-impact peer-reviewed research publications, multiple patents (including an IoT-based system for plant trait improvement), book chapters and edited volumes. In academic governance, she leads as Head of the Department of Life Sciences, and exhibits exemplary capacity in academic quality enhancement. Passionate about green campus initiatives, she champions sustainability and environmental education through both her administrative policies and scientific projects. A recipient of prestigious accolades—including the Distinguished Researcher Award (2025), the Literacy Leader Award for Blended Learning (2025), and the Lilavati Award for Women Empowerment (2022) — Dr. Akkara combines visionary academic leadership with dedicated mentorship to drive both scientific innovation and sustainable societal impact.

Selected Publications:

1. Akkara, P. J., Martin, S. A., Thiagarajulu, N., Bisht, A. B., Mishal, A., & Mathew, C. M. (2025). Green synthesised Catharanthus roseus-mediated iron oxide nanoparticles demonstrate enhanced antibacterial, antioxidant, and anti-diabetic properties. *Journal of Applied Biology and Biotechnology*, 13(4), 126-135. <http://doi.org/10.7324/JABB.2025.2207291>.
2. Nadar, N. R., Deepak, J., Sharma, S. C., Radha Krushna, B. R., Akkara, P. J., Ponnazhagan, K., Sahu, S., Vanitha, D. V., Sivaganesh, D., & Nagabhushana, H. (2025). Bismuth doped spinel CoCr₂O₄ nanocrystals for dual application on supercapacitor and dopamine detection. *Materials Science and Engineering: B*, 319, 118346. <https://doi.org/10.1016/j.mseb.2025.118346>
3. Ananda, B., Radha Krushna, B. R., Sharma, S. C., Salwe, K. J., Sharma, R., Akkara, P. J., Jerald, A. L., Jayannan, J., Manjunatha, K., Wu, S. Y., & Nagabhushana, H. (2025). Microwave enhanced carbon dots synthesis from eggshell membrane: Versatile applications in heavy metal ion sensing, strain-free detection of fingerprints, UV shielding, food packing and anti-counterfeiting. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 705(Part 2), 135740. <https://doi.org/10.1016/j.colsurfa.2024.135740>